Serial Number: 10/021,541 Filing Date: December 17, 2001

Title: SIR TARGET UPDATE ACCORDING TO CHANNEL CONDITIONS

Assignee: Intel Corporation

### IN THE CLAIMS

Please amend the claims as follows:

1. (Original) A communication apparatus, comprising:

a channel estimator to estimate channel parameters for a communication channel based

on a signal received from the communication channel; and

a quality measure target generator to generate a quality measure target value for the

communication apparatus using channel parameters estimated by said channel estimator, said

quality measure target value representing a desired value for a quality measure associated with

the communication apparatus.

2. (Original) The communication apparatus of claim 1, wherein:

said quality measure target generator generates a signal to interference ratio (SIR) target

value.

3. (Original) The communication apparatus of claim 1, wherein:

said quality measure target generator includes a quality measure target estimator to

determine an estimated quality measure target value using channel parameters estimated by said

channel estimator and a quality measure target correction unit to correct said estimated quality

measure target value based on performance information.

4. (Original) The communication apparatus of claim 3, wherein:

said performance information includes block error rate (BLER) information.

5. (Original) The communication apparatus of claim 1, wherein:

said quality measure target generator generates said quality measure target value using

symbol energy variance information associated with the communication channel.

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6. (Original) The communication apparatus of claim 1, comprising:

a quality measure estimator to estimate an actual quality measure value for a signal received from the communication channel.

7. (Currently Amended) The communication apparatus of claim 6, comprising:

a message generator to generate a power control message based on the estimated <u>actual</u> quality measure value and the quality measure target value.

- 8. (Original) The communication apparatus of claim 1, wherein:
  - said communication apparatus is a handheld communicator.
- 9. (Original) The communication apparatus of claim 1, wherein:

said communication apparatus is a base station transceiver.

10. (Original) The communication apparatus of claim 1, wherein:

said communication apparatus is part of a code division multiple access (CDMA) system.

11. (Original) A method for generating a quality measure target value within a

communication apparatus, comprising:

estimating channel parameters for a communication channel based on a signal received

from the communication channel; and

calculating the quality measure target value using the estimated channel parameters.

12. (Original) The method of claim 11, wherein:

calculating the quality measure target value includes determining an estimated quality

measure target value using the estimated channel parameters.

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### 13. (Original) The method of claim 12, wherein:

calculating the quality measure target value further includes correcting the estimated quality measure target value based on performance information associated with the communication apparatus.

# 14. (Original) The method of claim 13, wherein:

said performance information includes block error rate (BLER) information.

# 15. (Original) The method of claim 11, wherein:

estimating channel parameters includes estimating at least one of the following: the number of paths in the communication channel, the strengths of paths in the communication channel, the relative velocity of the communication apparatus, the fading rates of paths in the communication channel, symbol energy variances in the communication channel, and variances between symbols of different blocks within the communication channel.

# 16. (Original) The method of claim 11, wherein:

calculating the quality measure target value includes calculating a signal to interference ratio (SIR) target.

# 17. (Original) A communication apparatus, comprising:

- a channel estimator to estimate channel parameters for a communication channel based on a signal received from the communication channel;
- a performance estimator to estimate a performance parameter of the communication apparatus; and
- a quality measure target generator to generate a quality measure target value for the communication apparatus, wherein said quality measure target generator generates said quality measure target value using channel parameters estimated by said channel estimator and the estimated performance parameter determined by said performance estimator.

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# 18. (Original) The communication apparatus of claim 17, wherein:

said performance estimator estimates a receive error rate of the communication apparatus and said quality measure target generator uses said receive error rate to generate the quality measure target value.

# 19. (Original) The communication apparatus of claim 17, wherein:

said quality measure target generator uses the channel parameters to determine an approximate quality measure target value and the estimated performance parameter to correct the approximate quality measure target value.

### 20. (Original) The communication apparatus of claim 17, wherein:

said channel estimator estimates at least one of the following: the number of paths in the communication channel, the strengths of paths in the communication channel, the relative velocity of the communication apparatus, the fading rates of paths in the communication channel, symbol energy variances in the communication channel, and variances between symbols of different blocks within the communication channel.

# 21. (Original) The communication apparatus of claim 17, comprising:

a quality measure estimator to estimate a quality measure of the signal received from the communication channel; and

a message generator to generate a power control message based on the estimated quality measure and the quality measure target value.

# 22. (Original) A mobile communicator, comprising:

a first quality measure target generator to generate a first quality measure target value for a first remote base station using estimated channel parameters for a communication channel between said mobile communicator and said first remote base station;

a second quality measure target generator to generate a second quality measure target value for a second remote base station using estimated channel parameters for a communication channel between said mobile communicator and said second remote base station; and

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a site selection manager to select a remote base station to act as a servicing base station for the mobile communicator using at least said first quality measure target value and said

second quality measure target value.

23. (Original) The mobile communicator of claim 22, wherein:

said first and second quality measure target generators include SIR target generators.

24. (Original) The mobile communicator of claim 22, comprising:

at least one other quality measure target generator to generate at least one other quality

measure target value for at least one other remote base station, wherein said site selection

manager uses said at least one other quality measure target value to select said remote base

station to act as said servicing base station.

25. (Original) The mobile communicator of claim 22, further comprising:

a message generator to generate a power control message for a remote base station based

on a corresponding quality measure target value.

26. (New) A method comprising:

generating a first quality measure target value for a first remote base station using

estimated channel parameters for a communication channel between a mobile communicator and

said first remote base station;

generating a second quality measure target value for a second remote base station using

estimated channel parameters for a communication channel between said mobile communicator

and said second remote base station; and

selecting a remote base station to act as a servicing base station for the mobile

communicator using at least said first quality measure target value and said second quality

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## 27. (New) The method of claim 26, wherein:

generating a first quality measure target value comprises generating a first SIR target value; and

generating a second quality measure target value comprises generating a second SIR target value.

### 28. (New) The method of claim 26, further comprising:

generating at least one other quality measure target value for at least one other remote base station; and

selecting said remote base station to act as said servicing base station using said at least one other quality measure target value.

# 29. (New) The method of claim 26, further comprising:

generating a power control message for a remote base station based on a corresponding quality measure target value.

# 30. (New) A system comprising:

antenna to receive a signal from a communication channel;

despreader coupled to the antenna to despread the signal using code division multiple access techniques;

- a channel estimator coupled to the despreader to estimate channel parameters for the communication channel based on information from the despreader; and
- a quality measure target generator to generate a quality measure target value for the system using channel parameters estimated by said channel estimator, said quality measure target value representing a desired value for a quality measure associated with the system.

# 31. (New) The system of claim 30, wherein:

said quality measure target generator generates a signal to interference ratio (SIR) target value.

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### 32. (New) The system of claim 30, wherein:

said quality measure target generator includes a quality measure target estimator to determine an estimated quality measure target value using channel parameters estimated by said channel estimator and a quality measure target correction unit to correct said estimated quality measure target value based on performance information.

33. (New) The system of claim 32, wherein:

said performance information includes block error rate (BLER) information.

- 34. (New) The system of claim 32, further comprising:
- a rake receiver coupled to the despreader to isolate multipath components associated with a particular base station and to combine the components coherently;
- a decoder coupled to the rake receiver to decode a signal from the rake receiver into decoded signal information; and
- a cyclic redundancy check (CRC) unit coupled between the decoder and the quality measure target correction unit to detect and quantify CRC errors from the decoded signal information.
- 35. (New) The system of claim 30, wherein:

said quality measure target generator generates said quality measure target value using symbol energy variance information associated with the communication channel.

- 36. (New) The system of claim 30, further comprising:
- a quality measure estimator to estimate an actual quality measure value for the signal received from the communication channel.
- 37. (New) The system of claim 36, further comprising:
- a message generator to generate a power control message based on the estimated actual quality measure value and the quality measure target value.

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38. (New) The system of claim 30, wherein: said system is a mobile communicator.

39. (New) The system of claim 30, wherein: said system is a base station transceiver.